H.E.F. CANADA QUARTERLY

The Human Ecology Foundation of Canada

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Contents

THE HUMAN ECOLOGY FOUNDATION OF CANADA

The H.E.F. Canada Quarterly

The H.E.F. Canada Quarterly is a publication of The Human Ecology Foundation of Canada, a charitable organization under Canadian law, operating on a non-profit basis. The Quarterly is for people who are interested in health and its relation to our environment. It deals primarily with research in the field of clinical ecology, and also describes how people have improved their health by changes in habits, diet, and environment. As such, it does not offer medical advice, and we urge persons wishing to experiment with changes in their lifestyle to do so with the help and guidance of a knowledgeable physician.

The Human Ecology Foundation of Canada

One of the purposes of the Human Ecology Foundation is to promote the free exchange of information on the prevention and treatment of ecological illness. People who are ecologically ill are no longer able to adapt well to common exposures in their everyday environment. They may develop a variety of chronic or acute symptoms that are brought on by substances in the air, in food, or in water.

Natural inhalants such as pollens, dust, and moulds, and even natural foods may begin to affect people adversely. This aspect of the condition is often referred to as allergy. But the many synthetic chemicals that are now common around us can also cause symptoms, and overexposure to these can trigger ecological illness even in those with no history of allergy or other sensitivity to the environment. Symptoms may be mild and merely annoying, or they may become severe enough to interfere with a person's daily activities, family life, and career.

On a local basis, HEF Branches work toward finding sources of chemically less-contaminated food, water, clothing, and household furnishings, as well as providing counselling on changes of lifestyle that may alleviate symptoms. The Foundation and all its Branches would like to encourage others to become involved not only in research on the effects of environment on health, but in working toward a healthier, less-polluted environment.

Subscription and Membership

Membership in the Foundation includes a subscription to the H.E.F. Quarterly, which is produced four times per year. Annual membership and subscription fee is $20.00.

Product Information

Any products mentioned in the Quarterly should be carefully evaluated for personal compatibility, since individual sensitivities vary widely. Mention of a product does not imply that the Human Ecology Foundation endorses that product or service.

Notes from the Editor

Ecologic illness is no respecter of publication deadlines. Darlene Koski has been very ill, consequently, there is no "Letter from the President" in this issue of the Quarterly.

Darlene needs your help. Because we have not found some one to replace me as editor of the Human Ecology Foundation Quarterly and because we don't want to see the Quarterly die, Darlene will be working as the temporary editor. Darlene is already working very hard as the president of H.E.F. Canada, and as the president of H.E.F., Toronto Branch. She has additional professional and family obligations. We need an editor. I can assure you that the job is more interesting and less onerous than you might expect. It's even good fun. The editorial board helps you with ideas and materials. It's chairman, Dr. John Blair, finds articles, writes articles and restores perspective no matter what the crisis. His sense of humour is therapeutic, in fact. If you could give some times to this journalistic adventure, please, contact:

Darlene Koski, President,
Human Ecology Foundation of Canada,
65 Dolly Varden Blvd.,
Scarborough, Ontario,
M1H 2K2.

I would like, now, to wish you all a pleasant summer and continuously improving health.

Shirley M. Smith

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Ecologically Ill Visitors? Help!!!

Lynda Brooks

All of us with "Ecological Illness" have anxieties and many of these anxieties are connected to our homes. When you first discover you are ecologically ill, you go home and go through a period of guilt and decision-making. What should I get rid of? What do I have to get rid of? What can I part with and what do I just have to keep? Where can I get answers to these questions?

You've been told about the Human Ecology Foundation. Maybe this group will have some answers to the questions. At the time I joined, there was only an address, no telephone number for the group. It seemed like forever before I finally received a reply. Eventually I received the answers to many of my questions, unfortunately, there were some only I could answer.

The House-Cleaning

One of the first things to go was my plants. I wanted to cry - all my green friends. How bare the house seemed! My father was visiting and he was very sympathetic. He and my great-aunt each bought me a beautiful silk plant. That helped a bit.

Cleaning out the aerosol cans was easy, but what about the other cleaning supplies? All trial and error.

Remember all the work saving to get that wall-to-wall carpeting? Did it really have to go? Rationalization set in. Maybe the living-room rug was old enough - we'd keep it. We'd ignore that rubber underpadding and all the dust it was collecting.

I knew the bedroom had to be clean. Away went that rug. The room looked bare at first. Then out went the mattress and box-springs. We decided we should get a futon. I had always been very conservative; to sleep on a futon on the floor was a very big step. Luckily, my husband has a bad back and thought that it would be useful for him too. He was right.

We saw a clean-air filter on sale through an "H.E.F. Newsletter". We discovered that it would be more effective if it had charcoal and purafil filters. We heard that you could get filters made in Decator, Illinois. We had them made. More cost and more stress.

Visitors Arrive

We finally felt safe, secure, and comfortable in our home - that is until we decided to have a few ecologically ill people over. Then suddenly all the old questions reappeared.

What did I have in my house that could bother them? What would they think when they saw my livingroom rug? Did they all have safe places to live? What could I serve them? I had been to places that I couldn't tolerate. Would those people go through the same thing? How would they feel? Everyone arrived. I sat on pins and needles as everyone looked around. I felt as though on trial.

Everyone went home. No one said they were sick. I hoped that they would tell me if they had felt ill. They could be very helpful if they did notice a problem because it could be a problem for me also. I could then check it out.

What a relief, everyone had tolerated the house fairly well. For the next year, therefore, we had the H.E.F. meetings at our house. The furnace was a bit of a problem but the air filter seemed to keep it under control. Still, I always sat on pins and needles wondering if I had done something or cooked something to cause a problem for someone.

Then one day we had a problem with a drain-pipe. We had to cut a hole in the wall and put up some new wallboard. Three days later we had our next meeting. About half the executive felt sick. Such a simple change had made a huge difference.

Because we had to redecorate the dining-room, another member of our executive hosted our next meeting. She, too, went through all the anxieties of having a group of ecologically ill people in her home. As we compared notes, we had a good laugh. It felt good to know that someone else had experienced the same apprehensions.

Friends

Can you imagine what our friends and acquaintances go through when they have us over? Our homes are relatively safe but theirs aren't and we get sick. It is much easier for them to ignore us than to feel guilty about adding to our illness. We know what types of food and water we can consume. Do most of your friends even know the basic concept of your diet? Can you imagine preparing a meal without this knowledge? No wonder we only retain our closest friends. A good friend allows us to bring our own food without feeling badly about not having the food on hand.

Conclusion

I hope that sharing some of the stress I've gone through will help you cope with your stresses. We need to be more open and to share our experiences. I admit I was afraid to have anyone over. Sometimes I've been afraid to ask questions. I didn't want to appear stupid. If I had been doing the wrong things for a while and then wanted the answers on how to do them right, I'd feel guilty about having cheated.

This disease causes stress and stress causes more problems. Let's try to relax. Let's learn to sit back and laugh at ourselves - at least occasionally!

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The most loveable quality that any human being can possess is tolerance. It is the vision which enables one to see things from another's point of view.

IF-

If you can keep your head when all about you
   Are losing theirs and blaming it on you;
If you can trust yourself when all men doubt you,
   But make allowance for their doubting too;
If you can wait and not be tired by waiting,
   Or, being lied about, don't deal in lies,
Or, being hated, don't give way to hating,
   And yet don't look too good, nor talk too wise;

If you can dream - and not make dreams your master;
   If you can think - and not make thoughts your aim;
If you can meet with triumph and disaster
   And treat those two impostors just the same;
If you can bear to hear the truth you've spoken
   Twisted by knaves to make a trap for fools,
Or watch the things you gave your life to broken
   And stoop and build 'em up with wornout tools;

If you can make one heap of all your winnings
   And risk it on one turn of pitch-and-toss,
And lose, and start again at your beginnings
   And never breathe a word about your loss;
If you can force your heart and nerve and sinew
   To serve your turn long after they are gone,
And so hold on when there is nothing in you
   Except the Will which says to them: "Hold on";

If you can talk with crowds and keep your virtue,
   Or walk with kings - nor lose the common touch;
If neither foes nor loving friends can hurt you;
   If all men count with you, but none too much;

If you can fill the unforgiving minute
   With sixty seconds' worth of distance run-
Yours is the Earth and everything that's in it,
   And - which is more - you'll be a Man, my son!

Rudyard Kipling

OUR SPECIAL HOUSE

The Lamothe's
R.R. 5, (10 Cindy Place)
Georgetown, Ont.
L7G 4S8
(416) 877-8664

Since you are interested in our house, let us introduce the people who live in it:

Barbara is 15 years old and a high school student. Her hobbies are drawing and horse back riding. She has quite a few allergies (mainly inhalents) and asthma.

Carmen is 16 years old and a high school student. Her hobbies are gymnastics and dance. She has a few minor allergies.

Marg is a partner in the consulting business run from our house. Her hobbies are hiking, canoeing, and music. She has many allergies - especially to foods and chemicals.

Moe is a partner in the consulting business as well as a part owner of a manufacturing firm. His hobbies are canoeing and photography. He has a minor allergy - ragweed.

Spook is a small rabbit. No known allergies.

We moved into this house in the middle of February, 1984. It is a 3000 sq. ft. bungalow and includes an office. We are situated on the edge of town on a hill and in a controlled area of large lots (ours is slightly more than 1 acre). Because of the low density, Marg should be able to get the neighbours to spray their grass, etc. when the wind is blowing away from our house.

Our house is not ecologically perfect, but it was designed with our family in mind. Generally we tried to make it as "normal" as possible as it becomes very expensive when you start doing too many different things. Each family has to look at their sensitivities, funds available, work patterns, and time available then consider all the alternatives and come up with a workable compromise. Be positive and creative; it is possible we found, to have both a lovely home and a healthy one. Marg feels a lot better here and Barbara has not had a serious asthma attack since we moved in.

BASIC CONSTRUCTION

Basement - concrete block

Town Water - have installed a charcoal filter unit to remove chlorine from all water in the house, and a reverse osmosis unit to further purify the drinking water. (Marg is allergic to chlorine.)

Septic system and tile bed.

Traditional brick exterior with aluminum trim.

Fibre glass insulation in walls and ceilings sealed with a plastic vapour barrier, to keep moisture from entering walls and to keep insulation smells from entering the house. The outside (adjacent to the bricks) is covered with styrofoam sheet insulation.

Styrofoam sheets placed on the outside of the concrete blocks for basement insulation. This avoids exposed insulation in the basement.

Plywood roof sheeting over pre-fabricated trusses. Roof is finished with heavy duty asphalt shingles.

Poured concrete main floor, (to give a firm base to the ceramic tile) with steel supports. The system we used does not require the steel forms (which are normally left in place and tend to rust later) but uses plywood forms supported by the structural joists. The plywood forms are placed between the steel supports and then the cement poured on. Normally the plywood is sprayed with oil to facilitate removal. For us they did not spray oil on and just removed the forms before the concrete was completely set. The steel is painted with an anti-rust paint which has not bothered Marg, possibly because it is in the basement and isolated from the rest of the house.

Forced air heat pump (York) - with back up electric heat. Extensive venting and air cleaning system - see next section on filter system.

Dry wall used on walls and covered with CIL Professional latex paint.

Oak trim throughout house finished in "Aqua Fabulon" which dries very quickly and does not bother Marg.

All windows are aluminum exterior with oak on the inside finished with "Aqua Fabulon". They are covered with oak shutters (they do not hold dust the way fabric does). The shutters are finished with two coats of oil based material to allow movement, then sealed with "Aqua Fabulon".

Ceramic tile on all floors - placed directly on concrete with a concrete latex mix. We chose tile because it does not hold dust or outgas the way carpets or some other floors would.

Electric hot water tanks - no oil or gas heating units in the house.

Built-in vacuum system (Beam) - to keep dust from drifting around the house.

FILTER SYSTEM

The heating and air conditioning system is a York Heat Pump (2½ ton A/C, with 20 KW back-up electric furnace). The fan was replaced by a larger fan from a 5 ton unit to achieve air flow of just under 1600 CFM (normal is 1100 CFM for this unit). Total air volume in the house is 54000 cubic feet.

The filtration unit was built to our design, with a coarse metal mesh filter followed by two layers, 2" each, of steam activated coconut charcoal to remove odours in the air. The recommended flow rate for charcoal filtration is 50 FPM through the bed. Final dust filtration is by a Space Guard Air Cleaner. These units consist of high efficiency paper and are as effective as electronic air cleaners and do not give off ozone. The charcoal is placed in eight trays (four per layer) for ease of replacement. One layer of trays could have the charcoal replaced with Purafil.

It is necessary to maintain good air flow so that odours are not trapped in some areas of the house. Positive air flow is the most important feature of this house. There is a fresh air intake on the furnace but we did not use a heat exchanger since there is the possibility of mold and fungus growth in the units.

Problems and Considerations

When concrete is drying, it gives off a great deal of moisture. We had problems with condensation on the windows due to an excess of moisture in the house and cold air outside. Building in the summer would greatly reduce this problem.

The smell of the glue used for the wall tiles took about two months to outgas after it was applied. We moved into the house before the two months were up; however, it did not bother Marg except when she went into one of the closed rooms.

Wood shutters must be painted initially with an oil based substance or they won't move properly. Then they can be covered with a sealer such as Aqua Fabulon.

The odour of the outside window caulking was very strong even inside the house, but went away in a couple of days. They used a brown acrylic caulking; the other type with a lacquer base smells for a long time.

In winter building they have to keep the house warm before the furnace is installed and they like to use kerosene or propane heaters. We managed to get some electric heaters but we did have the other heaters going for a while during construction.

Because of the materials used for finishing, the house is somewhat noisy. We plan to add some wall hangings (washable) to absorb some of the sound.

At first we thought that the latex paint was not very durable but it needs about two or three months to set, then marks can be wiped off. If you wanted to put it in a very heavy traffic area, it might be possible to paint with the latex and then cover it with Aqua Fabulon or you might consider a latex-based eggshell enamel.

REMEMBER: Test as many of the materials as you can. What worked for us may not work for you.

THE BUILDER AND SUPPLIERS

We built on a cost plus basis which seemed to work out well since we had a number of different requirements and the builder had no objection to doing things the way we wanted.

Look for people or firms who are willing to listen to your wishes and who will do things your way. Some builders will do it anyway - as long as it is their way, using their materials!

Product Sources

Maletich Wood Products Ltd. - California Shutters
112 Doncaster Ave., Thornhill, Ont. L3T 1L3, (416) 881-1879

Oakwood Lumber and Millwork Co. Ltd. - Source for oak trim.
45 Lepage Court, Downsview, Ont. M3J 2A2, (416) 633-5148

Carbon and Filtration Products Company, Div. of Pertama-Tentar Inc.
9 Brynston Road, Islington, Ont. M9B 3C5, (416) 236-1169

Source for Granular Carbon, Air/Gas phase quality, made of coconut shell charcoal, steam (non-chemically) activated.

Downsview Woodworking Ltd. - Custom Kitchens
2635 Rena Road, Mississauga, Ont. L4T 1G6, (416) 677-9354
(Jack Kaufman)

Canam Steel Works
2570 Haines, Mississauga, Ont. L4Y 4A3, (416) 272-1221

21 Degrees Heating and Air Conditioning - heat pump, filter system, furnace.
7200 Tranmere Dr., Mississauga, Ont. L5S 1K4, (416) 671-2121

Aqua Fabulon - finish for wood products and sealer over other paints. Available at Heritage Wall Paper & Paint,
3245 Dufferin St. N., Toronto, Ont.

Latex Paint - CIL Professional Paints, Interior Latex Flat -For Industrial Use. Available at St. Clair the Paint & Paper People - CIL,
1945 Dundas St. E., Mississauga, Ont. (416) 625-3970

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Travel Hints:

(1) Take your own bedding or take your detergent and wash the motel's bedding.

(2) Many restaurants are very helpful when you phone ahead and explain your dietary problems. That way you avoid unpleasant surprises.

Lynda Brooks

The Social-Psychological Aspects of Ecologic Illness

Sabina DeVita

Editor's Note: This article contains excerpts from material presented to the Toronto Branch of the Human Ecology Foundation on May 18, 1983 by Sabina DeVita, a PhD. candidate at the Ontario Institute for Studies in Education (O.I.S.E.). Ms. DeVita stated that her analysis was based on the data she had accumulated to that point of her research, that the data was derived from a review of the literature and from interviews which she had conducted with victims of ecological illness. In choosing subjects for interviews, Ms. DeVita looked for, "a willingness to talk and an ability to cope with their illness in some way. It didn't matter to what degree they were able to cope, but they had to have something that they wanted to share with and offer to us."

THE DEFINITION OF CEREBRAL ALLERGY

What I was particularly interested in in my research were those people who have the psycho-pathological symptoms that psychiatrists or psychologists deal with such as depression, irritibility, hostility, schizophrenia, paranoia. I was interested in those people who were suffering from a reactionary situation rather than those who were suffering from a psychosomatic situation (the mind produces the symptoms).

THE RESEARCH CONCEPT

What I'm looking at is the holistic notion of health which means that the total being - the body, mind, emotions, and spirit - is involved in health or the absence of health.

THE STRESSORS

Hans Selyer has done a tremendous amount of work on stress. He points out how any stressor, be it on the psychological level or the physical level, adds to the stress load the person carries. What I see happening with severely allergic people and in my own experience is a situation in which you know what you are reacting to, but, that doesn't make in nice and easy to live your life.

(a) The Psychological Stressors

Ecological illness becomes a very limiting experience for people: they are not as independent as they once were, they are not able to go out and do things they were once able to do. Stress results. A number of my contacts said that they didn't really see a future, that being ecologically ill almost becomes a hopeless situation. Many of them found it difficult, if not impossible, to give up some aspects of their lifestyles, for example, their pets. Many held onto habits that were detrimental to their health, wearing perfume, for example. There were repressed feelings of resentment and anger, "Why is this happening to me?"

The expression of positive feelings of love were especially limited. The totality of the experience, then, became quite negative.

(b) Interpersonal and Social Stressors

Most respondents' interpersonal relationships were not as positive as they might have been because the respondents did not allow them to be positive. They saw themselves negatively: hopeless, no good. This happened especially while they were in reaction. When they were out of reaction they were able to see themselves differently, but, not all of them could pull themselves out of the negative state.

Some of the interpersonal and social stressors resulted from no longer being able to do as many things with other people, not being with some friends, changing friendships, relatives who were not understanding. Travel was curtailed; many could not travel at all. Eating in restaurants became impossible either because of the food or the tobacco smoke or the perfumes and laundry products used by other diners. Effectively these people are limited to their home environment and that produces stress.

Support groups diminished because there were a number of people in the suffers' lives who did not understand the nature of the illness: "It's all in your head", "What do you mean you're reacting to such-and-such? I've never heard of that". Since the individuals themselves were having difficulty accepting the fact that they could not be normal, the negative reactions of the surrounding people just reinforced their negative self-images.

COPING TECHNIQUES

I think that what I was really trying to identify and study in my research was the coping techniques which people with ecological illness use. What are the qualities, the characteristics, the belief systems, the attitudes, that a particular person has that help him get through the difficulties inherent in this disease? I found my data extremely interesting because my respondents came from different backgrounds and had had different life experiences, but they were seeing or experiencing in their healing very similar concepts.

(a) The Medical Aids

Individuals mentioned sticking to their diets, avoiding certain inhalents and contaminants as basic to their coping techniques. Many also used neutralizing drops and vitamin and mineral supplements.

(b) Isolation

A number of the respondents identified isolation as a coping technique. If they were in a social situation or at home and they were reacting they would isolate themselves from the rest of the family by saying, "I'm in a reaction right now", and this would help them get through the problem time without alienating people.

(c) A Positive Attitude

Everyone talked about the importance of having a positive attitude. These people talked about there being some reason for their being ill (perhaps not yet evident to them), about the positive results of their being ill. They talked about having to take responsibility for themselves. They saw that their purpose in life had changed quite dramatically. Some had changed their professional lives because of their illness, many also had changed the way they saw other people and the world. Humour played a vital part in their healing. Being able to laugh at their condition and at themselves was considered to be important. They felt it was important to be able to talk openly about what was happening to them. A number of them said that they did not see themselves as being stigmatized. They saw their illness as the means of forcing them to get to know themselves better, of forcing them to get in tune with their true selves.

(d) Physical Activity

The need for regular exercise as a coping technique was stressed. Most of them talked about the beneficial aspects of jogging or of going for long walks, especially during a reaction.

(e) Loving Relationships

We talked about loving, about having someone that they loved, about loving themselves. Having a support system was deemed to be crucial. A number of them said they did not have a support system, that it took them a long time to learn about the field and about other people who had similar kinds of medical problems. Family support was identified as a crucial factor in facilitating the lifestyle changes which were required.

(f) Forgiveness

Learning to forgive both themselves and other people surfaced both in the interviews and in the literature as an important factor in the healing process. They talked about the importance of getting in touch with and in tune with their pasts and then letting go. There was a general cleansing of the mind and of the body.

(g) Social Involvement and Commitment

The respondents talked about the importance of being involved in an activity or in a group where they could commit themselves to and give to other people. Consistently, interviewees said that this commitment to other people made life more meaningful, more purposeful. One person who had not previously perceived himself as being religious either in the sense of a belief in God, a Force, or universal energy, was quite surprised to find that he thought of himself as having a mission in life. In fact, each respondent saw himself as having a mission in life and that mission was to branch out from his own suffering to help other people. This help for other allergy sufferers could take political form, an attempt to make legislators aware of the dangers of pesticides, herbicides, and general chemical contaminants, of making the educational system aware of what is happening with children, of

educating the public.

Forgiving all those doctors to whom we travelled over all those years is an issue. Two people saw a purpose to that endless round of doctor's appointments. Educating doctors about ecological illness became their way of helping other people. Several people talked about their experiences with psychologists and psychiatrists and wished that there were people in the field to whom they might have gone. The need for a therapist, a councillor, someone to whom the individual can talk about the total experience (not just the physical aspects), about what is happening in his life as a whole, surfaced as a major need in the area of ecological medicine.

(h) Relaxation Therapy

Many of the interviewees were willing to search out other ways of healing. They read and read and read. One participant had used Norman Cousins' book on humour as a healing agent, Anatomy of an Illness. One physician from Washington, D.C. talked about the success he is having with the ecologically ill and visualization therapy. He pointed out that the central nervous system cannot differentiate between fantasy and reality. The images that you create in your mind of walking through a forest, for example, are as powerful as the actual experience.

The Psychological History of Ecological Illness

There do seem to be definite psychological stages that people go through after the diagnosis of ecological illness. Although the research participants did not identify or label the stages they went through, they were all able to articulate their fear reactions, their depressive reactions. The work of Dr. Elizabeth Kübler-Ross on the stages of death and dying are relevant here. Kübler-Ross identified the stages, in order, as: denial, anger, bargaining, depression, and acceptance. Anger and resentment were very strong among my participants. Many went through the bargaining stage and found that it didn't work. When "making a deal" failed, the individuals were reminded of the totality of their condition and at that point they felt a tremendous sadness and hopelessness which culminated in depression - not just the depression from having the reactions but also the depression over having the reactions.

Before the diagnosis of ecological illness is made, many people experience a stage of disintegration: the person does not know what is happening; there is confusion, pain, upset; he is constantly ill. After the diagnosis, there is hope that something can be done and the person enters the transition stage. Kubler-Ross's stages seem to fit into this transition stage when I analyze my data. Please note that because these stages have been identified, it does not mean that everyone goes through all the stages or goes through them in order, or goes through a stage and is finished with it for all time. None of my participants went through those first three stages quickly. They felt quite happy when they found out what their problem was but they also talked about the dialogues they had with themselves, how difficult they found life with this disease, the fighting against the restrictions. There were fluctuations in how well they accepted

their state. You can't always tell, they said, if what you are doing is denying or testing. It is very difficult to tell if what you are doing is positive or negative because your reactions aren't clear cut. It is sometimes difficult to tell if your depression and anger are the result of the disease or if you are using the illness as an excuse to behave badly. A number of the respondents talked about taking responsibility for themselves so that even when they had an idea something might not be right they would tell people around them, especially loved ones, and would try to limit the personal interaction.

Relationships

(a) Friends

You have to learn to be your own best friend. Where other people are concerned, sometimes it's a matter of making a decision, "Do I really want this person as my friend?" "Is this person able to understand my situation?"

(b) Husbands/Wives

"It is very difficult to know what you can ask from a loved one." There are a lot of marriage breakups because of this illness and there is no one answer. It is really a matter of finding your own path and, perhaps learning from others, working that through. One of the points that came out with people who were married was the importance of keeping the lines of communication open, of letting the other person know what was going on because of reactions. It is helpful if the physician treating the wife, for example, asks the husband to come in in order to back up the woman, saying that this is the way it works when your wife is having these reactions, it really is a problem, it is not all in her head. The people you are dealing with also go through stages and there is a tendency for denial. If you have a doctor who is willing to spend the time with you and your spouse, it really does make a difference.

It is also a matter of what is going on with him. A lot of the interviewees talked about having outside support people because the spouse has a tremendous overload too. Maybe he is experiencing a lot of reactions too - this makes the situation even more delicate and difficult! It's a matter of searching out therapists, psychologists, psychiatrists who are compassionate and open and warm and who will listen.

Conclusion

The respondents all stressed the need to emphasize the positive and to acquire outside interests. Because people's lives are so constrained, they tend to think there is nothing available to them. They forget that there is always at least one thing they can do and that that one outside activity may lead to others.

A SAMPLE VISUALIZATION SESSION

Sabina De Vita

Editor's Note: This visualization session was conducted by Ms. De Vita as part of her presentation to the Toronto Branch of the Human Ecology Foundation of Canada meeting on May 18, 1983.

What I would like you to do is sit in a comfortable, relaxed position. It is preferable that your feet are flat on the floor so that you have what we call a "groundedness". It is also suggested that your arms and hands fall gently on your lap. Closing your eyes and minimizing your gaze in some way will help you to tune into the self and to become aware of where you are. How is your head? Does it feel tense? Loosen it, let if fall between your shoulders. Be aware of your breathing. Make it a deep breath. Take in a lot of air and feed your lungs and feed your body. Let it out. Be aware of your breathing and how your lungs feed your body. Try to make your breath slow and long and as I play this music become aware of how you are sitting and relaxing in the chair. Be aware of your shoulders, your head, feel the other parts of your body. Enjoy your experience.

Now, imagine yourself on a meadow on a clear, warm, beautiful day with a comfortable temperature. Make it a seventy-five degree day. Imagine yourself breathing in the fresh air. Enjoy the view around you. Now see yourself walking towards the brook and as you get closer to the brook, try and listen to the music. Now, as you approach the brook, you stand there enjoying the view and the sound of the running water. You can feel the sun surrounding you, the warm, golden rays upon you, a healing light-energy completely surrounding you. You are standing there enjoying the warmth, the healing force. If there has been a part of your body that has been ill or in pain, ask that part to get a message to you. If there is something you need, understand what it is. Do your best to understand and follow it. And if the message does not come forth for you, that's all right. Now experience that special, loving, healing energy and send it to that part of you that was in pain. Allow the golden rays, the healing rays of the sun to penetrate and heal you. Now imagine yourself in perfect, radiant, natural good health. Allow the rays and energy of the sun to come through you, through the top of your head, giving you this vitality, and strength, and health. Now see yourself in different situations, feeling alive, active, and healthy. See yourself as radiantly beautiful, feeling the healing light of the sun. And as you see yourself in this radiant, healthy way, say to yourself, "I love and accept my body completely. I am now full of radiant health and energy". Now see yourself again walking through the meadow, turning away from the brook, coming back to the place where you started. Become aware of your breathing and how you are sitting. Feel your body against the chair, where your feet are, where your hands are on your lap. Be aware of where you are and when you are ready you can slowly open your eyes.

Concluding Remarks

The first stage of doing any type of visualization is actually going through the stage of relaxation. The more practice you have in doing it, the easier it becomes and the more quickly the imagery comes.

There are a number of books in the area of creative visualization which are extremely helpful. Creative Visualization by Schatke is basically a manual of visualization techniques. This exercise was one of his. He does an excellent job of summarizing the effectiveness of the technique, the ideas behind the technique, and some of the techniques themselves. Embracing Disease is another helpful book.

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The Tree of Creativity

try
new things
create and grow
close your eyes
allow your imagination
to let new ideas flow
once you've started
there'll be no end
let your mind
scheme
dream
look
see
try
grow
learn
create

Plant some seeds.
Start branching
off.
Bear some
fruit.

Don't just leaf
things as they are-
Bloom
where you are
planted.

Get to the root
of the situation.

Author Unknown

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"It is the greatest of all mistakes to do nothing because you can only do a little. - Do what you can."

"After all, it is not what is around us, but what is in us; not what we have, but what we are, that makes us really happy."

ECOLOGIC ILLNESS AND THE FAMILY

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Abstract

Illness related to environmental factors can put a strain on normal family life. The person affected may not function well as a family member. Keeping the person well may require some work and compromises by other family members. Family pressures can reduce any tendency to over-react to the environment, but also can reduce compliance with the ecological approach. The strain of dealing with ecological illness can weaken or strengthen the family unit.

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An exhausted and near-drowned swimmer is helped to shore by the wind and waves, or he is carried further out to sea by the under-tow. The family can be the helpful wind and waves, or the hindering under-tow - making all the difference between swimming and sinking. A lost child can be shown the path to get through life successfully, or the family can forever hinder his attempts to win. Success or failure in any venture can be independent of, or in spite of family influence, but often can be related to family background and support. Our heritage and culture, like that of many other animals from baboons to whales, is orientated around the family. Historically, the stronger the family, the stronger and more stable the society as a whole.

When one or more members of a family become ill, the whole family is affected. Any illness, a coronary, a broken leg, is stress for the individual and a stressor for the rest of the family. This increased stress in the family as a whole, can unify or strengthen the family, or can weaken and break up the family. The special feature about ecologic or environmentally related illness is that the family plays an even greater role in perpetuating, controlling, or correcting the illness.

Familial Support

Regardless of family structure, all families serve some common functions. The main function is support. For the children, this support comes in the form of food, shelter, clothing, protection, and a loving stable interface between them and the outside world.

Support comes in the form of honest constructive criticism. From your family you hear things that your best friend won't tell you, "You have a pimple on your chin". "Your tie is crooked." "You look great for the office but your shirt doesn't match your pants." "You made an ass of yourself at the party last night." "Your breath smells today."

Support includes good communication with other members of the family. The family is an outlet for vocalizing inner thoughts, hopes and frustrations. Only with your own family at home can you say, "My boss is an idiot." "I deserve a big raise for what I accomplished today." "My company would be in trouble without me."

Support comes in the form of companionship and physical affection. The family provides the outlet for emotions, touching, and stroking.

Families do not always function in an ideal way. Perfection is for robots without emotions or frustrations, mothers without menstrual cycles, families with higher incomes than expenditures, family members that are apart enough to keep out of each other's way, children that can't help getting "A's" at school, and children who have only calm, clean, goal-orientated neighbourhood friends. Whatever weaknesses there are in the family structure, function, or dynamics, these will be highlighted by any illness in a family member. The illness can increase these flaws in the way the family works together or the attempt to fight the illness can bring the family closer together functioning better than ever.

Ecologic illness in an individual affects the way he or she thinks, feels, or behaves. Environmental factors may reduce mental efficiency impairing thinking, memory, concentration, and judgement. Communication skills may, therefore, be affected. In children especially, learning abilities may be a problem. Emotions are also affected. Overstimulation may occur at any age, but can be a particular problem in children when presenting as hyperactivity and attention deficit disorder. Depression and irritability are common symptoms of ecologic illness. Widespread physical symptoms/problems may include colic in babies, persistent bedwetting in children, headaches, asthma, palpitations, diarrhea, joint and muscular pain, and general fatigue. Depression and fatigue can easily decrease libido. Control of all of these problems requires some attention to diet, chemical exposures, dust and mold control, general safety of the home, and general family activities in and out of the home.

Effects of Ecological Illness

A number of situations show the effect of ecologic illness on the family. One example is the combined wife/mother/mistress/career woman who has frequent migraine headaches. These are severe enough to force her to the darkened bedroom and totally withdraw from family involvement until the throbbing pain eases off. This may disrupt family life for a few hours per month, or a few days per week. Gone is normal support, communication, compassion, companionship, and physical affection, and, who has to do the dishes after supper?

There is also the fatigued, nearly burned-out, preoccupied, depressed male executive. What energy is left for normal family

life and support? Even an erection requires some mental effort. The root of his problem may be occupational and psychosocial pressures, and perhaps, it is also the wheat he is getting for breakfast, lunch, and bedtime snack.

Other examples of ecologic illness affecting the family can be given. There is the working father, car mechanic, veternarian, or printer, bringing home traces of his occupational exposures: grease and oil, animal danders, or printing ink. One or more members of the family might be susceptible to these environmental contacts. There are farmer's children too sensitive to barn dust, molds, and animals to help with the chores, let alone take over the family farm when they are older. There is the learning-disabled child requiring special schools, special transportation to school, and special school lunches, while his younger brothers and sisters are quickly catching up and passing him academically. There is the irritable, colicy milk-sensitive child waking up each night crying while his new mother is wondering what she must be doing wrong. The closer the family, the more all these situations affect everyone in the family.

It seems that women have more trouble with environmental illness than men. I don't know if any scientific comparisons have been done. Perhaps there is just an apparent disproportionate number of women with environmental symptoms because women are more likely to seek medical help. Some people feel that allergies are just a sign of weakness and men, in particular, don't want to report any of these problems. However, I see a number of large, fit-looking men of football-playing stature and they don't mind complaining of allergic rhinitis or whatever. My own feeling is that women really do get more symptoms and are more likely to react to various environmental factors.

There are several risk factors for women. Pregnancy is physically and nutritionally stressful. It is not a normal state and it does cause a certain amount of wear and tear on the body. Another risk factor is the constantly changing levels of estrogen and progesterone throughout the menstrual cycle. Menopause can also be an unstabilizing factor. Women are at much greater risk of getting chronic overgrowth of yeast in the gastrointestinal tract. Yeast is promoted by pregnancy, birth control pills, and by the antibiotics which are more frequently taken by women than men because of more urinary tract infections. Yeast overgrowth increases the tendency to react to environmental factors, especially to foods and chemicals.

When the environmental problems are related to the home, the homemaker and preschool children are often affected the most. Whoever spends the most time at home is at greater risk of getting symptoms. The problem may arise from fumes from the gas stove in the kitchen. The mother or homemaker may suffer from depression, headaches, and irritability. Mold overgrowth in the basement, under sinks, and in the bathroom is likely to have the most effect on whomever spends more time in the house. Indoor pollution from any source is likely to affect the homemaker first.

A teenager faces special problems with changes in body, stature, and identity. Amidst social pressures to conform, he must find himself and create his own identity. Ecologic illness is a special nuisance. It is a social advantage to be able to cope with pop, sugar, and junk foods. But if he consumes these, they may affect his behaviour in a way that upsets the entire family. There may be problems with mood swings, depression, and aggression. Does the family just wait until this phase passes, force/teach him to straighten up and comply with a safer diet, or kick him out of the house? Edwin Markham wrote:

> He drew a circle that shut me out--
> Heretic, rebel, a thing to flout.
> But Love and I had the wit to win:
> We drew a circle that took him in!

Coping with Ecological Illness?

1) Food Allergy

It is not unusual for one of several children in a family to be overstimulated or hyperactive. This causes a lot of wear and tear on the mother or homemaker-parent especially. The child may be reacting in an unacceptable way to many normal foods enjoyed (addictively) by other members of the family. Controlling hyperactivity in the affected child can mean major changes in the eating habits of the entire family. Will the family support the child in this way or will they carry on freely eating the foods that affect him, forcing him just to try to "grow out of it"? One hyperactive boy was in the habit of drinking cola every day. This was always stocked in the refrigerator because the father enjoyed one glass of rum and coke every night after work. What should be done in a case like this? The father could switch to gin and tonic, scotch and soda, or a bottle of beer. He could have a glass of water or perhaps the boy could learn to stop getting into his father's cola.

2) Alcohol

Alcoholism can be viewed in part as an ecologic illness. Should the spouse of an alcoholic continue drinking and stocking alcohol in the house? Is it just a matter of discipline on the part of the affected person? Some people have learned that they simply cannot stock certain foods in the house: chocolate, cookies, sweet pastries, or alcohol. The discipline or the willpower to avoid these foods is not strong enough. Not stocking certain foods is a family decision and compromise.

3) Smoking

There are medical reports of increased respiratory problems in the infants and children of smokers. There are many examples of asthmatic children with one or both parents smoking. Some of these parents have no idea that they are aggravating the child's asthma. Many of these parents cannot stop smoking. They are addicted to cigarettes and to stop means difficult weeks of

physical and mental discomfort. Sometimes it is one of the parents who has breathing trouble, and the spouse, older children, and numerous visitors to the home all smoke. In other cases, the smoker himself is having symptoms and he is perpetuating his own illness.

4) Pets

A family pet, usually a dog or a cat, often with an affectionate name, can be an important member of the family. Sometimes a human member of the family becomes sensitive to the animal dander and this significantly contributes to illness, whether asthma or eczema. Finding a new home for the pet is never easy, and in many cases the pet is easier to care for than the irritable, demanding child. The pet may have been in the family longer than the child. When the decision is finally made that it is the pet that has to go, you have family compromise on behalf of the affected member.

5) Chemicals

A chemically susceptible member of the family makes some special demands on the rest of the family. There is a ban on nail polish, nail polish remover, aerosol sprays, disinfectants, air fresheners, insecticides, smoking, perfumes, shaving lotions, painting, and use of solvent cleaners and smelly glues. The rest of the family can cooperate and help keep the home chemically less contaminated, or they may refuse since this puts too many restrictions on their life-style.

6) Shopping

There is more stress on the parent who does the food shopping and preparation. Keeping the whole family satisfied with a variety of alternative foods is usually impossible and is met with much criticism. The family member who is the most susceptible to foods may complain the loudest. There is a lot of frustration, especially at the beginning, as attempts are made to find alternative foods to milk, beef, bread, wheat flour, corn, and egg. Sometimes those milk-free, wheat-free, egg-free, yeast-free biscuits turn out just like checkers.

7) The Psychological Factor

The gyro on a ship keeps it more stable in the water. The ship resists changes in direction. Families also function in this way. There is resistance to change. It is hard enough for one person to change his/her eating habits, and harder still for the whole family to change. The family discourages compulsive rotation of the diet and strict avoidance of chemicals. How often do children talk their parents into going to McDonald's one more time? What tired homemaker isn't happy to let McDonald's do the work for this meal?

This same resistance to change has a positive side to it. It is protection from the Total Withdrawal Impulse when it is realized that you are reacting to multiple environmental factors.

The Total Withdrawal Impulse tells us: "Don't eat, don't drink the water, don't breathe the air, don't go anywhere, don't socialize, don't have people over", or, in other words, "Hide from the world, don't try to adapt to it." Families encourage a much more moderate, down to earth, both feet on the ground, realistic approach.

8) The Financial Problem

Ecologic illness imposes financial stress on the family. The illness can interfere with the ability to work and income is reduced. There may be increased expenditures on account of an unsafe home. Many people have lost money because of urea formaldehyde foam insulation. There is the cost of putting it in, the cost of taking it out, and possibly the cost of selling the home at a loss. There is the cost of replacing a gas stove and other gas appliances. Some people require special air-cleaners and water-treatment devices. Sometimes carpeting has to be replaced with safer floor covering. Sometimes it is necessary to move because the home cannot be made safe, or the home is in a polluted area. Changes in diet to organic or chemically less contaminated food can increase the cost of living. Rotation of the diet can mean stocking a wider variety of foods in the house and it may no longer be possible to fill up the kids with bread and cheaper foods. There is also the cost of various vitamin and mineral supplements when these can be used. Nystatin, the commonly prescribed drug for candida, is very expensive without a drug plan. Allergy testing and treatment can be another financial burden.

The Family as a Negative Influence

Still another consideration, is the fact that the family can work as a negative influence. Poor family dynamics, communication problems, negative interactions, negative support and criticism, inadequate physical affection, and various discouraging attitudes, can all serve as a base for the development of ecological illness. All of these family problems add to the stress load of each family member. There may be little or no reserve energy left over to cope with ragweed, mold, eggs, or chemical fumes. What sensitivities already exist are allowed to grow or become more intense. Coping or adapting becomes more difficult. Symptoms and behavioural patterns become deeply rooted and impossibly tangled, thus helping to perpetuate poor family dynamics. A priority is to try and break all the self-perpetuating vicious circles so that you can get rid of the symptoms. If objective outsiders or professional counsellors do not feel that the family can be mended, then it is better for the family to split up. A broken home may be much less stressful for a child than an unstable, chronically unhappy home.

Conclusion

A strong supportive family will try and meet the demands imposed by ecologic illness on a family member. As much as

possible, the family member affected must take responsibility for getting well, staying well, and staying adapted to the many environmental stressors. He or she needs the support and encouragement of the rest of the family, along with good humour, fun, common sense, and the pressure to hurry up and get adapted again.

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CHILDREN LEARN WHAT THEY LIVE

If a child lives with criticism
He learns to condemn.

If a child lives with hostility
He learns to fight.

If a child lives with ridicule
He learns to be shy.

If a child lives with shame
He learns to feel guilty.

If a child lives with tolerance
He learns to be patient.

If a child lives with encouragement
He learns confidence.

If a child lives with praise
He learns to appreciate.

If a child lives with fairness
He learns justice.

If a child lives with security
He learns to have faith.

If a child lives with approval
He learns to like himself.

If a child lives with acceptance and friendship
He learns to have love with the World.

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Tell me, I'll forget. Show me, I may remember.
But involve me and I'll understand.

-Chinese Proverb

STIMULATION & BEHAVIOR MODIFICATION IN ECOLOGIC ILLNESS RECOVERY

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Introduction

Maladaptive responses to environmental substances, whether somatic or central nervous system responses, become highly "overlearned" by the methods of repetition and intensity. A repeatedly evoked response - whether by interpersonal relationship, stimuli from environmental situations or evoked disordered physiology by hypersensitive reactions to environmental substances (foods, chemicals or inhalants) - becomes more easily evoked by multiple stimuli similar to those originally triggering the response. Furthermore, a single exposure, high-intensity response can "train in" automatic or "overlearned" responses, without multiple exposure to similar stimuli.

It is important for clinical ecologists to realize that clearly bona fide organic responses to foods, chemicals and inhalants can, in time, lead to increasing anxiety in response to an assortment of stimuli that were associated with or similar to the original response. Sight, smell, touch, and texture may evoke anxiety and phobic-type responses identical to the original response, even though these cues may not in themselves have the organic capacity of evoking a response. These cues of similarity may be so subtle as to defeat even a double-blind testing. It is more correct to consider such "overlearning" of responses as the rule rather than considering them as only occasionally occurring. Often these "overlearned" phobic responses train out in time - when contact with the original offending substance is withdrawn. Such "natural" re-training occurs 1) with exposure to stimuli during a more relaxed state and 2) while dreaming. However, these cannot be depended upon in every case. This is why the majority of ecologically ill persons can profit by learning relaxation and imagery reapproach to substances they have maladaptively responded to - whether they be food, chemicals or inhalants. Furthermore, anxiety-based phobic responses to irrelevant stimuli that were present only by chance when the initial bona fide organic response occurred need to be trained down by relaxation and imagery reapproach.

Even more serious than the learning of phobic responses relating directly or indirectly to genuinely evoked maladaptive responses are obsessional evoked responses. Phobic responses are evoked from muscle tension or an assortment of external sensory cures. In contrast, obsessions and their motor component (compulsions) result from thoughts evoking the response. Often phobias and obsessions exist in the same person. Obsessions range from

minor personality and character disorders to frank psychosis, in which they reach their greatest intensity.

By-and-large, the psychotic ideation and experiences, including delusions and hallucinations, are obsessional in nature, i.e., thought-evoked. In addition, some are distortions of perception caused by a state of metabolic toxicity resulting from the maladaptive reactions to environmental substances. The psychosis stems from an excessive environmentally-triggered production of endorphins, the presence of exorphins, toxic methylated amines (bufotenine; o-methyl-bufotenine; N,N, dimethyltryptamine; dimethoxyphenylethylamine, adrenochrome) and the production of opiate alkaloids. Obsessionalism is even more inherently a product of ecologic illness than phobias. The reason for this is the development of an acute acidic state in response to reactions. Here the acidic state of a withdrawal phase of addiction has been caused by an adaptation response to the frequently contacted substances that are maladaptively reacted to.

This disordered acid-base balance, with repeated acute acidic states, disorders the ratio of alpha endorphin to gamma endorphin.[1] Alpha endorphin provides the capacity to focus and concentrate on a subject while gamma endorphin provides the capacity to voluntarily drop the focus and thus extinguish responses. In states of acidosis gamma endorphin is reduced. In this state of disordered ratio of alpha endorphin to gamma endorphin, the subject can concentrate and focus on a subject, but cannot drop the focus or extinguish the response. The obsession develops out of the state of acute acidosis resulting from addiction and other responses evoking acute episodes of acidosis. Obsessional thoughts of anticipation and other responses can evoke an identical response to the initial evoked organic response. Relaxation of the muscles has no effect on obsessional thoughts. Obsessions and compulsions can be trained out by repeatedly inhibiting the thought or the compulsive motor act.

It is important to understand that the corrective learning achieved by behavior modification practices can only be maintained while the maladaptive organic responses are corrected. This necessitates the maintained correction of addictions and other acute maladaptive responses to foods, chemicals, and inhalants, as well as maintaining a noninfected and adequately nourished state.

Discussion - The Role of Addiction

To a considerable degree, frequent contact with foods, chemicals or inhalants results in the adaptation of addiction. Behaviorally this can be described as relief on contact with the substance, and symptoms emerging within a few hours of its withdrawal. Chemically it is observed to be a disordered endorphin metabolism: several self-made endorphins are increased to the extent that addiction occurs to these self-made narcotic substances. It has been experimentally documented that an excess of these self-made narcotics, can produce addiction.[2]

Thus, addiction can be understood as caused by narcotics which - in the event that foods and chemicals ingested do not contain narcotics - consist of narcotic substances produced by the body itself during disordered amino acid metabolism. There are several known self-made narcotics (endorphins) including methionine enkaphalin, leucine enkaphalin, beta endorphin, opiate alkaloids, alpha endorphin and gamma endorphin. This excess and otherwise disordering of self-made narcotic substances in turn disorders neuronal and endocrine function.

Another source of narcotics is exorphins. These are long-chained peptides resulting from partially digested proteins (i.e., gastric acid-pepsin digest and failure of pancreatic enzyme digest of the small intestine).[3] The brain and gut have the same receptor sites for narcotics. It is not only the neurons that are reduced or inhibited in function but also the stomach, intestine and pancreas.

The withdrawal phase of addiction is always temporarily acidic. This acidic phase results in disordering alpha and gamma endorphin metabolism, leading to obsession. It also disorders urea cycle metabolism so that ammonia, which is a byproduct of amino acid metabolism, cannot be adequately made into urea. Thus, there is a rise in arterial ammonia which quickly attaches to neurons and muscles. Ammonia is highly toxic to the neurons and is known as a sclerosing agent capable of initially inhibiting - and with prolonged and frequent exposure capable of killing - neurons.

My observation has been that maturity-onset diabetes is the chemistry of addiction - in the early stage being chemical diabetes and in the latter stage maturity-onset diabetes. Bouts of hyperammonemia are characteristic of the diabetic disease process. In fact, in the extreme case when diabetic coma occurs it is an ammonia coma.

Motor neuron disease is one of the complications of diabetes. It has recently been demonstrated, in testing a series of motor neuron disease cases, that the only consistent substance present in the injured neurons is ammonia.[4] The more fulminating the disease process, the higher the amount of ammonia.

There are a variety of motor neuron diseases named separately due to their slight variations. Classic examples are amyotrophic lateral sclerosis and the motor neuron disorder secondary to diabetes mellitus. There is reason to believe that all of these motor neuron diseases are simply variations of the diabetic disease process from the resulting hyperammonemia. Ammonia initially inhibits rather than kills neurons. Therefore, it can be understood that neurons that have been inhibited by ammonia or other toxic substances can be again activated through electrical stimulation if these toxic substances have been removed.

The Role of Stimulation

Exercise can evoke and thus aid in correcting endorphin metabolism.[5] Therefore, it is important that all ecologically ill patients exercise. Electrical stimulation can evoke endorphins and is the basis of pain relief by such methods as Transcutaneous Electrical Stimulation (TENS) Instruments, Alpha Stem 2000 Instrument, Myoflex, Sedac and other similar electrical stimulators - to the maximum of evoked neuronal stimulation produced by an electro-

convulsive level stimulus. TENS and Alpha Stem 2000 instruments can be used in mild cases to reduce symptoms; in more severe cases, with high anxiety and phobias, the use of the Sedac instrument provides best results. In cases of paranoia, psychosis and deep depression electro-convulsive therapy provides best results. It should be understood that these stimulation treatments can be used to correct the consequences of disordered chemistry and over-learned responses resulting from maladaptive responses to environmental substances.

The Role of Muscle Relaxation and Imagery Reapproach

If free-floating anxiety and phobias do not disappear spontaneously by avoidance of the initial evoking environmental substances, then it is in order to train the patient to relax completely, and through imagery, reapproach the feared stimuli that evoke anxiety and phobic responses. Free-floating anxiety not attached to any particular stimuli can disappear based on learning relaxation alone; phobic responses require a reapproach to the feared situation. This is done on a hierarchial basis in which the subject first wins with the low level stimuli and gradually approaches the higher level evoking stimuli. The subject must first learn to stay completely relaxed while doing this reapproach.

Initial therapy sessions should be coached sessions in the office. However, these sessions can be taped, and the taped drills used subsequently. It requires many hours of practice for the subject to overcome his anxieties and phobias. Therefore, all training need not necessarily be done in the physician's office. Most patients with ecologic illness can benefit by relaxation and systematic desensitization drills.

Carbon Dioxide Excitation Inhibition For Training Out Phobias

Ten percent CO_2 has the capacity to excite a positive life-like imagery containing both color and movement. Fifty percent CO_2 has the capacity to block an image within 15 to 30 seconds. This technique of inhibiting the imaged phobic response with 50% CO_2 and exciting a corrective imagery response with 10% CO_2 can sometimes correct a single phobia in 15 to 30 minutes.

Stroboscope Excitation & Inhibition For Training Out Phobias, Obsessions & Compulsions

Eight to 12 per second is the relaxed brain's alpha rhythm. Three per second evokes a lapse state. Eighteen to 22 per second evokes the capacity of activating an eidetic image consisting of a projected life-like image containing color, movement and depth.

A stroboscope with a diffuse screen (milk-white without any markings or evidence of light filament) set at 22 per second can activate a projected eidetic image on the screen. It usually takes about 30 minutes to learn how to transfer the image in the mind to the image projected on the screen. This intense life-like

image will only last about three minutes before the brain fatigues and the image disappears because the brain frequency cuts back to 11 per second. Therefore, these intense images are used only as a flash. Imagery such as succeeding where one has failed before or happy when one is depressed, can provide a corrective experience retraining the brain and emotion. Maladaptive responses can be trained down by placing them on the screen and inhibiting by breathholding or even better, by 3-per-second stimulues switched onto the screen by another stroboscope. This requires two stroboscopes using the same screen, with one set at 22-per-second and the other at 3-per-second, in which a switch is made from the 22-per-second to the 3-per-second after the image has been placed on the screen. Thus a painless inhibition (aversion) is achieved.

Voluntary stroboscope-evoked imagery is the opposite of involuntary toxic-evoked hallucinations. Once the toxic state is removed, the voluntary stroboscope-evoked eidetic imagery can be used to train down the overlearned tendency to hallucinate on cue, by thoughts or in response to environmental cues that in the past had been associated with the toxic-evoked hallucinatory experience.

The Role of Hyperventilation

Hyperventilation occurs often in anxious and depressed patients.[6] Surprisingly it is also often observed as a direct response to an environmental substance such as a food, chemical or inhalant. Hyperventilation reduced the carbon dioxide in the blood, resulting in an inadequate supply of carbonic anhydrase. Carbonic anhydrase drives the alpha rhythm which is the relaxed brain rhythm. Therefore, it can be understood that a hyperventilating person cannot relax. No matter how the hyperventilation may develop, whether secondary to anxiety or as a direct response to an environmental substance, it needs to be trained down. This is done by teaching the person to relax and breathe at the rate of three to four times per minute. This can be incorporated in the relaxation drill. Holding the breath for 10-second intervals during relaxation practice will provide four breaths per minute, while 15-second intervals of no breathing will provide three breaths per minute. Usually the beginner is more comfortable at four breaths per minute.

It should be understood that hyperventilation repeatedly evoked does become learned. No matter how it was initially evoked, it needs to be trained out.

Confrontation Drill For Behavioral Change

Frequently disordered emotion and behavior are the direct consequence of adaptive addiction and other maladaptive reactions to foods, chemicals and inhalants which disorder brain function. Some maladaptive social habits and addictions can be changed by developing a maintained consciousness of logical reasons for change. Building awareness can be achieved by a confrontation drill - that is, by asking a question which will build an awareness of need for change. Questions can be asked repeatedly by

therapist, parent, teacher, friend, etc., or can be placed on cards for frequent review when the appropriate stimulus occurs. Questions are less likely to be resisted than statements or attempts to persuade.

An example would be, "What is a good reason not to smoke tobacco?" or "What is a good reason not to eat a particular food?" If desirable, both questions and answers can be placed on cards for frequent review. This confrontation technique can be used to correct behavior, correct orientation, teach social values, build an awareness of the consequences for addiction, etc.

Methods of Inhibiting Obsessional Thoughts

A person can place in mind an obsessional thought that can be turned into an image. While holding this image in mind, the person takes a deep breath and holds it until the image disappears. The strength of the obsessional thought can be determined by how long the breath is held. Many will have a cancellation of imagery within 30 seconds, but some will hold their breath as long as two minutes to cancel the imagery.

It is important to teach the person not to summate the thought - that is, to think it over and over - but instead, to turn the thought into an image which can be dispelled with the breath-holding exercise. The person is taught to relax, and while relaxed, to repeatedly bring up a troubled thought or feeling turned into an image, and then to hold the breath until this leaves. These are usually 15-minute practice sessions, repeated daily or several times a day.

"Thought-stop" is an exercise which has considerable benefit for some people. The word "stop" is said vigorously at three-second intervals for three minutes, or until the thought stops. Then the attention is switched to another subject and maintained as long as possible. When the maladaptive thought crowds in again, the exercise of "thought-stop" commences again. This exercise can be taped and practiced as needed throughout the day.

Aversion can be arranged by means of an electric stimulus - usually produced in the hand - sufficient to inhibit an imagery held in the mind. Thus the person places an image of a maladaptive response in the mind and it is inbihited through the electrical stimulation. This aversive exercise also requires complete relaxation beforehand.

Imagery aversion can also be used. The maladaptive response is placed in the mind, then exchanged for some unpleasant scene such as smelling a skunk. It is necessary to repeat these aversive stimuli many times in order to extinguish an obsessional thought. Aversion can also be used for inhibiting motor acts.

Orientation response-inhibition is used for the more serious obsessional ideas that are beyond the control of the patient, and from which several days' avoidance of the response-evoking substances does not free him. Orientation response-inhibition involves a moment of unconsciousness to block the thought with the highest level of inhibition. This moment of

unconsciousness is produced by a brief nonconvulsive-level stimulus from an electric shock machine.

Ultimately the patient must experience success, with corrected perception replacing disturbed perception. He must be given an assignment to repeatedly observe that ideas of reference are not occurring, that people are not staring, and that he is no longer having hallucinations.

Method of Inhibiting Compulsive Motor Behavior

An electric stimulus applied to the hand or any other part of the body sufficient to inhibit a motor response can train out that response. This inhibition must be practiced over an extended period of time in order to extinguish motor behavior.

Motor Neuron Stimulation

In multiple sclerosis (MS) there is swelling of the myelin, pressure from which inhibits neuronal function both in the spinal cord and in the brain. In this illness the neurons are not killed, but are simply inhibited sufficiently long that extinction of disuse occurs, and motor function is thus affected. In dealing with MS, it is necessary first to find the reaction-provoking substance(s) causing the swelling, and to eliminate such exposures. Then the neurons must be electrically stimulated to function again. At the same time, coaching is needed to reestablish motor responses. Through this triple approach, many multiple sclerotics can be rehabilitated from a state of paralysis.

Motor neuron disease is a state in which the toxicity of the illness, especially the emergence of bouts of hyperammonemia, have initially inhibited - and in time destroyed - motor neurons in both the spinal cord and the brain.

Electrical Stimulation of the Brain

There are some cases that do not spontaneously recover their brain function until stimulation occurs. If recovery isn't apparent after a two-week avoidance of commonly used foods, it is wise to assume that some degree of stimulation is needed. If high anxiety, phobias and insomnia continue to exist, then Sedac treatment under anesthetic can usually reverse this state of continued symptoms.

If the person continues to be paranoid or depressed, or to have hallucinations and delusions, then electric shock associated with orientation response-inhibition training can usually reverse the disordered state. If an illness has not been present for more than two years, spontaneous recovery will usually occur. The length and intensity of the illness will determine whether or not such spontaneous recovery can occur. However, we should understand that stimulation can do much to encourage a return of normal neuronal function affecting the capacity for normal excitation (awake, oriented) and inhibition (sleep, relaxed).

CASE HISTORIES

Orientation Response-Inhibition Practice

Pat is in her late 20s, and developed an ecologic illness because she lived in a new all-pine house. Her reactions had spread to most foods as well as many inhalants. She was, indeed, a cripple by reason of her pervasive reaction to her environment. She lived in a bedroom with an air filter and wore a mask.

In my office testing room she said she smelled something to which she was reacting. When I placed her in a private room, she again reported reactions. She requested the window be opened and, with the open window, an air filter operating, and a mask on, she said she could barely tolerate the private room. She was tested under these conditions for the next two weeks. When she reacted to a test food, she would hysterically scream, "I am dying, I am dying!" There was no change in this behavior during the two-week period.

Finally I proposed to her that having been so seriously ill for so long a time would have the consequence of training in anticipated responses such as both the anticipated response of dying as well as the anticipated response of reaction. We had no way to know which of these were the bona fide organic reactions or the anticipated reactions. I proposed that we use an anesthetic followed by Sedac followed by orientation-response inhibition training.

I used two obsessional ideas with Pat. One was, "I smell it! I'm going to react!" The other was, "I am reacting! I'm going to die!" These phreases were repeated to her four times a minute for 15 minutes. Immediately following each verbal cue a moment of unconsciousness was electrically produced. When awakened from this session she came to the test room, sniffed the air, and said, "There is nothing here I am reacting to." After this she tested in this room with the other patients. She also no longer screamed, "I am dying, I am dying!" when she did react to foods.

I encouraged her to come out of her bedroom and go out on the beach and jog. With encouragment she began an active program and soon was enjoying vigorous jogging - even in the rain! She started shopping even in areas where she was exposed to heavy chemicals. I had to instruct her not to overexpose herself, but to stay for only brief periods of time. She bought shoes and clothes by making brief excursions to department stores.

Today she is happy and functioning well in society - although no longer living with the unreasonably heavy exposure of a pine house. Without orientation response-inhibition training, she would today likely still be isolated in her room, with air filter, ionizer and mask - considered simply a victim of her extreme environmental sensitivities.

Although she does react to environmental exposures, she can recognize and back away from them. Moreover, she no longer suffers the anticipation of reactions or of dying when this occurs.

In my experience, obsessions about death are classic for prolonged bio-ecologic illness. If a person feels ill enough long enough, he simply wants to die to escape the pain. Probably even more fundamental is the type of chemical disorder occurring in the brain in these environmental illnesses. Reactions to environmental substances activate the avoidance areas of the brain, and the obsession to escape everything - including life - develops. I have also observed that orientation response-inhibition training is most valuable in training out obsessions about death (suicidal ideation, or otherwise) and injury to others (homicidal ideation, or otherwise).

Motor Neuron Stimulation

David was a 50-year-old drafting instructor with 18 years of heavy exposure to an ammonia processing machine for making blueprints. Upon examination, it was also demonstrated that he was developing a chemical stage of diabetes which itself would produce hyperammonemia. Thus he had both an external and an internal source of ammonia. His left arm was withered, and dangled uselessly by his side. The right arm could be partially used, but not well enough to comfortably raise a spoon to his mouth, or to turn a doorknob. There was a considerable wasting of the muscles of his right arm.

We applied Sedac stimulation that involved the entire spine in the circuit. During stimulation, he was asked to - and could - raise both arms above his head. He practiced raising his arms and using his hands during the whole stimulation period. After the stimulus was removed, he could still raise his arms above his head. He then discovered he could use his arms and hands to twist a doorknob, and he could feed himself comfortably. In this case, it is obvious that even though many neurons had been destroyed, some were merely in a state of inhibition rather than destruction. These could be activated through electrical stimulation, and responses could be trained back in through encouraging voluntary movement of muscles while the neuron-activating stimulus was applied.

It was obviously a necessity to stop David's contact with any external source of ammonia, and also to stop its production internally. The total treatment of his illness has included clinical ecology, nutrition, and stimulation to return muscle function.

Summary and Conclusions

Maladaptive responses evoked by environmental substances including foods, chemicals and inhalants commonly causes development of somatic and central nervous system symptoms. The repetition and intensity of these maladaptive responses bear a direct relationship to the extent of the training in of highly overlearned responses. These, then, can be evoked by numerous cues that have been associated with these responses.

Often these cues are quite irrelevant to the organic state initially evoking the responses. Obsessions are a logical

outcome of the disordered chemistry of responses to environmental substances, especially when these responses have developed into a state of addiction with its disordered acid/base balance. The acidic state disorders the ratio of alpha endorphin to gamma endorphin, thus understandably producing a state of obsessionalism, since reduced gamma endorphin inhibits the ability to extinguish responses.

Anxieties and phobias can be trained out by relaxation and reapproach to the symptom-evoking stimuli through systematic desensitization. However, obsessionalism can only be handled by inhibition of the thoughts themselves. For the more serious out-of-control cases, orientation response-inhibition of these thoughts is the most effective method of training out obsessionalism. Thus appropriate treatment of the ecologically ill includes: 1) isolating and identifying the substances to which they are responding, 2) providing appropriate nutrients to handle the disordered metabolism produced by these responses, and 3) providing behavioral modification training appropriate for training down anxieties, phobias, hyperventilation, obsessions and compulsions that result from the illness, but that sometimes do not disappear spontaneously or completely with withdrawal of the initiating symptom-evoking substances.

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Editor's Note: Dr. Philpott - the author of this article - is a trained and experienced psychiatrist as well as a clinical ecologist. Most clinical ecologists do not have the training and skills to utilize the techniques outlined by Dr. Philpott in this article. Therefore, clinical ecologists should not use these techniques in their practice unless they have received adequate training and worked with psychiatrists familiar with the techniques and any problems that might be encountered in their implementation.

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TEN COMMANDMENTS OF HUMAN RELATIONS

1. SPEAK TO PEOPLE - there is nothing so nice as a cheerful word of greeting.
2. SMILE AT PEOPLE - it takes 72 muscles to frown, only 14 to smile.
3. CALL PEOPLE - the sweetest music to anyone's ears is the sound of his own name.
4. BE FRIENDLY and helpful, if you would have friends, be a friend.
5. BE CORDIAL - speak and act as if everything you do is a genuine pleasure.
6. BE GENUINELY interested in people - you can like almost everybody if you try.
7. BE GENEROUS with praise - cautious with criticism.
8. BE CONSIDERATE with the feelings of others - there are usually three sides to a controversy: yours, the other fellow's, and the right side.
9. BE ALERT to give service - what counts most in life is what we do for others.
10. ADD TO THIS a good sense of humour, a big dose of patience and a dash of humility, and you will be rewarded many-fold.

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